#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-020998 Address: 333 Burma Road **Date Inspected:** 26-Feb-2011

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes An Qing Xiang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes N/A **Delayed / Cancelled:** No

**Bridge No:** 34-0006 **Component:** OBG

#### **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 14, OBG 13AW (NWIT # 08396)

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

SEG3013M-328, 036, 039 SEG3013D-235, 237, 238 SEG3013AH-112

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

OBG Seg 14W:

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Repair welding of weld joint no: SEG3020Y-030 [Bottom Plate (BP) 3091A to Longitudinal Diaphragm (LD) 3051A, Complete Joint Penetration (CJP) weld in between panel point (PP) 127~127.3]. The welder is identified as 047864 and was observed welding in the 2G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC CWI was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-2G(2F)-FCM-Repair-1. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2662 Rev-3.

Repair welding of weld joint no: SEG3020Y-032 [Bottom Plate (BP) 3091A to Longitudinal Diaphragm (LD) 3051A, Complete Joint Penetration (CJP) weld in between panel point (PP) 127.5~128]. The welder is identified as 066398 and was observed welding in the 2G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC CWI was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-2G(2F)-FCM-Repair-1. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2662 Rev-3.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020AA-019, 020 (Stiffener X4994F to Longitudinal Diaphragm (LD) 3048A, Fillet weld). The welder is identified as 066239 and was observed welding in the 3F position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2133-ESAB.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020AA-021 (Stiffener X4994F to Longitudinal Diaphragm (LD) 3048A, CJP weld). The welder is identified as 066239 and was observed welding in the 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2233-ESAB.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020Y-027, 028 (Stiffener X4994E to Longitudinal Diaphragm (LD) 3051A, Fillet weld). The welder is identified as 045175 and was observed welding in the 3F position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2133-ESAB.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020Y-029 (Stiffener X4994E to Longitudinal Diaphragm (LD) 3048A, CJP weld). The welder is identified as 045175 and was observed welding in the 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2233-ESAB.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020L-177 (Floor Beam (FB) 3325A to stiffener X4886B, Fillet weld at Panel Point PP127). The welder is identified as 201215 and was observed welding in the 2F position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2132-ESAB.

Repair welding of weld joint no: SEG3020E-053 [Longitudinal Diaphragm (LD) 3048A to Floor Beam (FB) 3343A, Complete Joint Penetration (CJP) weld at panel point (PP) 128.3]. The welder is identified as 045246 and was observed welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC CWI was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-3G(3F)-FCM-Repair-1. Repair welding was done as per Critical Welding

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Repair (CWR) Report: B-CWR 2735 Rev-1.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

## **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang: 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer